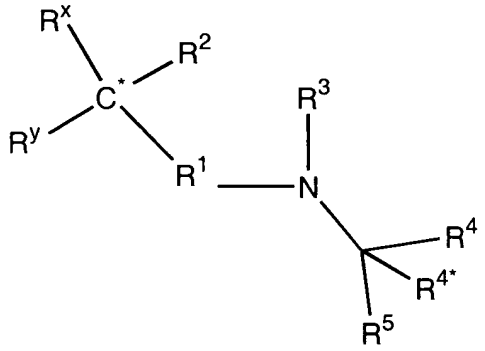
IN THE CLAIMS:

Please enter any changes in the claims indicated in the complete copy of the pending claims, as sought to be amended, presented below:

Claims 1-42 (Canceled)

43. **(Currently Amended):** A compound of the following formula:



or a pharmaceutically acceptable salt thereof,

wherein:

(1) C^* is a substituted carbon;

(2) R^2 (a) is hydrogen, (C1-C6) alkyl, (C1-C6) alkoxy, cyano, (C2-C7) alkanoyl, aminocarbonyl, (C1-C6) alkylaminocarbonyl, or dialkylaminocarbonyl wherein each alkyl is independently C1 to C6, (b) comprises (where R^1 is not aminoethylene, -O-R^8 or -S-R^{8*}) hydroxy, fluoro, chloro, bromo or (C2-C7) alkanoyloxy, (c) forms a double bond with an adjacent carbon or nitrogen from one of either R^1, R^{xb} or R^{yb}, or (d) is R^{2a} linked by R^{2b} to C^*;

(2^i) R^x is R^{xa} linked by R^{xb} to C^*;

(2^{ii}) R^y is R^{ya} linked by R^{yb} to C^*;

(2^{iii}) R^{xa} and R^{ya}, are independently Ar, which is phenyl or naphthyl, heteroaryl, or a 5 to 7-membered non-aromatic ring having from 0 to 2 heteroatoms selected from the group consisting of oxygen, sulfur and nitrogen, and R^{2a}, when present, is Ar, and wherein:

(a) heteroaryl comprises thienyl, furanyl, thiazolyl, isothiazolyl, oxazolyl, isoxazolyl, benzothienyl, benzofuryl, ~~benzoazolyl, benzodiazolyl~~, benzothiazolyl, or benzoxazolyl, or methylenedioxyphenyl,

(b) each of R^{xa} and R^{ya} can be independently substituted with one of R^q, R^rO- or R^sS-, wherein each of R^q, R^r and R^s are independently Ar, heteroaryl, adamantyl, or a 5 to 7-membered non-aromatic ring having from 0 to 2 heteroatoms selected from the group consisting of oxygen, sulfur and nitrogen, and

(c) R^{xa}, R^{ya}, R^{2a}, R^q, R^r and R^s can be substituted or additionally substituted with one or more substituents selected from the group consisting of fluoro, chloro, bromo, nitro, hydroxy, cyano, trifluoromethyl, amidosulfonyl which can have up to two independent (C1-C6) N-alkyl substitutions, (C1-C12) alkyl, (C2-C12) alkenyl, amino, (C1-C6) alkylamino, dialkylamino wherein each alkyl of dialkylamino is independently C1 to C6, (C1-C6) alkoxy, (C2-C7) alkanoyl, (C2-C7) alkanoyloxy, trifluoromethoxy, hydroxycarbonyl, (C2-C7) alkyloxycarbonyl, aminocarbonyl that can be substituted for hydrogen with up to two independent (C1-C6) alkyl, (C1-C6) alkylsulfonyl, or amidino wherein the amidino can be independently substituted with up to three (C1-C6) alkyl groups, wherein:

(i.) the substitutions of R^{xa} and R^{ya} can be combined to form a second bridge between R^{xa} and R^{ya} comprising (1) methylene or ethylene, or (2) -CH=CH-, or (3) sulfur, or (4) oxygen, or wherein R^{xa} and R^{ya} can be directly linked by a single bond,

(d) wherein at least one of R^{xa}, R^{ya}, R^q, R^r or R^s is heteroaryl, or a second bridge between R^{xa} and R^{ya} comprises sulfur or oxygen as set forth below, or Ar substituted with a methylenedioxy;

(2^{iv}) R^{xb} and R^{2b} are independently a single bond or (C1-C2) alkylene;

(2^{v}) R^{yb} is a single bond, oxy, (C1-C2) alkylene, ethenylene or -CH= (where the double bond is with C^*), thio, methyleneoxy or methylenethio, or either -N(R^6) or -CH_2-N(R^{6*})-, wherein R^6 and R^{6*} are hydrogen or (C1-C6) alkyl;

(3) R^1 comprises: a straight-chained (C2-C3) aliphatic group; =N-O-(ethylene), wherein the unmatched double bond is linked to C^*; -O-R^8 or -S-R^{8*} wherein R^8 or R^{8*} is a ethylene or ethenylene and O or S is bonded to C^*; aminoethylene where the amino is bonded to C^*:

wherein R^1 can be substituted with up to one hydroxy, up to one (C1-C6) alkoxy or up to one (C2-C7) alkanoyloxy, with up to two independent (C1-C6) alkyl, with up to one oxo, up to one (C1-C6) alkylidene, with the proviso that the hydroxy, alkoxy, alkanoyloxy or oxo substituents are not bonded to a carbon that is bonded to a nitrogen or oxygen;

wherein if R^1 contributes a heteroatom linked to C^*, then R^{yb} does not contribute a heteroatom linked to C^*; and

wherein the alkyl or alkylidene substituents of R^1 can be linked to form a 3 to 7-membered non-aromatic ring;

(4) R^3 (a) is hydrogen, (C1-C6) alkyl, or phenyl or phenylalkyl wherein the alkyl is C1 to C6 and the phenyl or phenyl of phenylalkyl can be substituted with the same substituents defined above for Ar of R^{xa}, (b) is -$R^{12}C(R^{xx})(R^{yy})(R^{11})$, wherein R^{12} is bonded to N , R^{xx} is independently the same as R^x, R^{yy} is independently the same as R^y, R^{11} is independently the same as R^2 and R^{12} is independently the same as R^1;

(5) R^4 and R^{4*} are independently hydrogen or (C1-C6) alkyl, or one of R^4 and R^{4*} can be (C1-C6) hydroxyalkyl; and

(6) R^5 is $(CO)NR^{13}R^{14}$, $(CO)OR^{15}$, $(CO)SR^{16}$, $(SO_2)NR^{17}R^{18}$, $(PO)(OR^{19})(OR^{20})$, $(CR^{22})(OR^{23})(OR^{24})$, CN or tetrazol-5-yl, wherein (a) R^{13}, R^{14}, R^{15}, R^{16}, R^{17}, R^{18} R^{19} and R^{20} are independently hydrogen, (C1-C8) alkyl which can include a (C3-C8) cycloalkyl, wherein the carbon linked to the oxygen of R^{15} or the sulfur of R^{16} has no more than secondary branching, (C2-C6) hydroxyalkyl, aminoalkyl where the alkyl is C2 to C6 and the amino can be substituted with up to two independent (C1-C6) alkyls, Ar-alkyl wherein the alkyl is C1-C6, or Ar, and (b) R^{22} is hydrogen or OR^{25} and R^{23} , R^{24} and R^{25} are independently (C1-C6) alkyl,

phenyl, benzyl or acetyl or, where R^{22} is hydrogen, the alkyls of R^{23} and R^{24} can be combined to include 1,3-dioxolane or 1,3-dioxane:

wherein the phenyl or naphthyl groups of R^{13}, R^{14}, R^{15}, R^{16}, R^{17}, R^{18}, R^{19}, R^{20}, R^{22}, R^{23} or R^{24} can be substituted with substituents selected from the group consisting of fluoro, chloro, bromo, nitro, cyano, hydroxy, trifluoromethyl, amidosulfonyl which can have up to two independent (C1-C6) N-alkyl substitutions, (C1-C6) alkyl, (C2-C6) alkenyl, (C1-C6) alkylamine, dialkylamine wherein each alkyl is independently C1 to C6, amino, (C1-C6) alkoxy, (C2-C7) alkanoyl, (C2-C7) alkanoyloxy, trifluoromethoxy, hydroxycarbonyl, (C2-C7) alkyloxycarbonyl, aminocarbonyl that can be N-substituted with up to two independent (C1-C6) alkyl, (C1-C6) alkylsulfonyl, or amidino that can be substituted with up to three (C1-C6) alkyl;

wherein R^{13} and R^{14} together with the attached nitrogen can form a 5 to 7-membered ring.

44. **(Previously Presented):** The compound of claim 43, wherein at least one of R^{xa}, R^{ya}, R^{q}, R^{r} and R^{s} is thienyl or furanyl.

45. **(Previously Presented):** The compound of claim 43, wherein at least one of R^{xa} and R^{ya} is thienyl or furanyl.

46. **(Previously Presented):** The compound of claim 43, wherein

(A) at least one of R^{xa}, R^{ya} and R^{2a} is substituted with fluoro, chloro, bromo, hydroxy, trifluoromethyl, trifluoromethoxy, nitro, cyano or (C3-C8) alkyl, or

(B) at least one of R^{xa} and R^{ya} is substituted with R^{q}, $R^{r}O$- or $R^{s}S$-, or

(C) R^{3} is hydrogen, (C1-C6) alkyl, or phenyl or phenylalkyl wherein the alkyl is C1 to C6 and either such phenyl can be substituted with

(1) one of R^q, R^rO- or R^sS-, wherein each of R^q, R^r and R^s are independently Ar, heteroaryl, adamantyl, or a 5 to 7-membered non-aromatic ring having from 0 to 2 heteroatoms selected from the group consisting of oxygen, sulfur and nitrogen, and

(2) wherein either phenyl of R^3, R^q, R^r and R^s can be substituted or additionally substituted with one or more substituents selected from the group consisting of fluoro, chloro, bromo, nitro, hydroxy, cyano, trifluoromethyl, amidosulfonyl which can have up to two independent (C1 C6) N alkyl substitutions, (C1-C12) alkyl, (C2-C12) alkenyl, amino, (C1-C6) alkylamino, dialkylamino wherein each alkyl of dialkylamino is independently C1 to C6, (C1-C6) alkoxy, (C2-C7) alkanoyl, (C2-C7) alkanoyloxy, trifluoromethoxy, hydroxycarbonyl, (C2-C7) alkyloxycarbonyl, aminocarbonyl that can be substituted for hydrogen with up to two independent (C1-C6) alkyl, (C1-C6) alkylsulfonyl, or amidino wherein the amidino can be independently substituted with up to three (C1-C6) alkyl groups, or

(D) the ring structures of R^{xa}, R^{ya} and R^{2a}, including substituents thereto, otherwise include at least two aromatic ring structures that together include from 15 to 20 ring atoms.

47. **(Previously Presented):** The compound of claim 46, wherein at least one of R^{xa}, R^{ya}, R^q, R^r and R^s is substituted with fluoro, trifluoromethyl, trifluoromethoxy, nitro, cyano, or (C3-C8) alkyl.

48. **(Previously Presented):** The compound of claim 43, wherein at least one of R^{xa} and R^{ya} is substituted with R^q, R^rO-, or R^sS-.

49. **(Previously Presented):** The compound of claim 43, wherein an Ar of at least one of R^{xa}, R^{ya} and R^{2a} is phenyl.

50. **(Previously Presented):** The compound of claim 43, wherein R^{yb} is oxy, methyleneoxy, thio, or methylenethio.

51. **(Previously Presented):** The compound of claim 50, wherein R^{yb} is oxy or thio.

52. **(Previously Presented):** The compound of claim 43, wherein R^5 is $(CO)NR^{13}R^{14}$, $(CO)OR^{15}$ or $(CO)SR^{16}$.

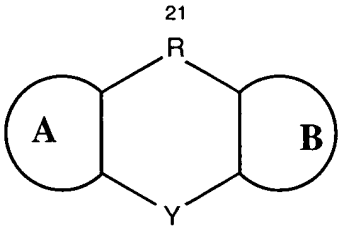
53. **(Previously Presented):** The compound of claim 52, wherein R^5 is $(CO)OR^{15}$ and R^{15} is (C2-C6) alkyl, (C2-C4) hydroxyalkyl, phenyl, phenylalkyl wherein the alkyl is C1-C3, or aminoalkyl where the alkyl is C2-C6 and the amino can be substituted with up to two independent (C1-C3) alkyls, wherein the phenyl or the phenyl of phenylalkyl can be substituted.

54. **(Previously Presented):** The compound of claim 52, wherein R^5 is $(CO)OR^{15}$ and R^{15} is hydrogen.

55. **(Previously Presented):** The compound of claim 43, wherein R^4 is hydrogen, methyl or hydroxymethyl and R^{4*} is hydrogen.

56. **(Previously Presented):** The compound of claim 43, wherein R^1 is $-O-R^8$ or $-S-R^{8*}$.

57. **(Previously Presented):** The compound of claim 56, wherein R^{xa}-R^{xb}-, R^{ya}-R^{yb}- and C^* form:



wherein A and B are Ar ring structures consistent with the definitions of R^{xa} and R^{ya}, respectively, and Y is C^* wherein R^{21} either (i.) completes a single bond linking two Ar rings of

R^{xa} and R^{ya}, or (ii.) is (C1-C2) alkylene or -CH=CH-, and wherein R^{xa} and R^{ya} can be substituted.

58. **(Previously Presented):** The compound of claim 57, wherein R^{21} is CH_2CH_2 or CH=CH.

59. **(Previously Presented):** The compound of claim 43, wherein R^{xa} and R^{ya} together can be substituted with up to six substituents, R^{2a}, R^q, R^r and R^s can each be substituted with up to 3 substituents, and wherein the presence of each of R^q, R^rO- or R^sS- is considered a substitution to the respective ring structure of R^{xa} and R^{ya}.

60. **(Previously Presented):** The compound of claim 43, wherein a phenyl of R^3 is substituted with up to three substituents.

61. **(Previously Presented):** The compound of claim 43, wherein the Ar of R^{13}, R^{14}, R^{15}, R^{16}, R^{17}, R^{18}, R^{19} or R^{20} is substituted with up to three substituents.

62. **(Currently Amended):** The compound of claim 43, wherein R^3 is hydrogen, (C1-C6) alkyl, or phenyl or phenylalkyl wherein the alkyl is C1 to C6 and the phenyl or phenyl of phenylalkyl can be substituted with:

one of R^q, R^rO- or R^sS-, wherein each of R^q, R^r and R^s are independently Ar, heteroaryl (wherein heteroaryl comprises thienyl, furanyl, thiazolyl, isothiazolyl, oxazolyl, isoxazolyl, <u>benzothienyl, benzofuryl, benzothiazolyl, benzoxazolyl</u> ~~or one of the foregoing fused to phenyl,~~ or methylenedioxyphenyl), adamantyl, or a 5 to 7-membered non-aromatic ring having from 0 to 2 heteroatoms selected from the group consisting of oxygen, sulfur and nitrogen, and

one or more substituents selected from the group consisting of fluoro, chloro, bromo, nitro, hydroxy, cyano, trifluoromethyl, amidosulfonyl which can have up to two

independent (C1-C6) N-alkyl substitutions, (C1-C12) alkyl, (C2-C12) alkenyl, amino, (C1-C6) alkylamino, dialkylamino wherein each alkyl of dialkylamino is independently C1 to C6, (C1-C6) alkoxy, (C2-C7) alkanoyl, (C2-C7) alkanoyloxy, trifluoromethoxy, hydroxycarbonyl, (C2-C7) alkyloxycarbonyl, aminocarbonyl that can be substituted for hydrogen with up to two independent (C1-C6) alkyl, (C1-C6) alkylsulfonyl, or amidino wherein the amidino can be independently substituted with up to three (C1-C6) alkyl groups.

63. **(Previously Presented):** The compound of claim 43, wherein the compound is an optically pure enantiomer.

64. **(Previously Presented):** A pharmaceutical composition comprising the compound of claim 43 and a pharmaceutically acceptable excipient.

65. **(Previously Presented):** The pharmaceutical composition of claim 64, wherein the compound is present in an effective amount for:

(1) treating schizophrenia,
(2) treating epilepsy,
(3) treating spasticity,
(4) treating muscle spasm,
(5) treating pain,
(6) treating mood disorders,
(7) enhancing memory or learning, or
(8) treating learning disorders.

66. **(Previously Presented):** The compound of claim 43 wherein:

(1) R^2 is hydrogen or wherein R^2 forms a double bond with an adjacent carbon from R^1,

(2) R^{xa} and R^{ya} are phenyl, thienyl or furanyl, and can be substituted,

(3) R^{xb} is a single bond and R^{yb} is a single bond or oxy, and

(4) R^5 is $(CO)NR^{13}R^{14}$ or $(CO)OR^{15}$, wherein R^{13}, R^{14}, and R^{15} are independently hydrogen; (C1-C8) alkyl which can include a (C3-C8) cycloalkyl, wherein the carbon linked to the oxygen of OR^{15} has no more than secondary branching; (C2-C6) hydroxyalkyl or aminoalkyl where the alkyl is C2 to C6 and the amino can be substituted with up to two independent (C1-C6) alkyl or phenylalkyl, wherein the alkyl is C1-C6 and the phenyl can be substituted with substituents selected from the group consisting of fluoro, chloro, bromo, nitro, cyano, hydroxy, trifluoromethyl, amidosulfonyl which can have up to two independent (C1-C6) N-alkyl substitutions, (C1-C6) alkyl, (C2-C6) alkenyl, (C1-C6) alkylamine, dialkylamine wherein each alkyl is independently C1 to C6, amino, (C1-C6) alkoxy, (C2-C7) alkanoyl, (C2-C7) alkanoyloxy, trifluoromethoxy, hydroxycarbonyl, (C2-C7) alkyloxycarbonyl, aminocarbonyl that can be N-substituted with up to two independent (C1-C6) alkyl, (C1-C6) alkylsulfonyl, amidino that can substituted with up to three (C1-C6) alkyl.

67. **(Previously Presented):** The compound of claim 66, wherein R^2 forms a double bond with an adjacent carbon from R^1.

68. **(Previously Presented):** A method of (1) treating schizophrenia comprising administering a schizophrenia treating effective amount of a compound, (2) of treating epilepsy comprising administering an epilepsy treating effective amount of a compound, (3) treating spasticity comprising administering a spasticity treating effective amount of a compound, (4) treating muscle spasm comprising administering a muscle spasm treating effective amount of a compound, (5) treating pain comprising administering a pain treating effective amount of a compound, (6) treating mood disorders comprising administering a mood disorder treating effective amount of a compound, (7) enhancing memory or learning comprising administering a memory or learning enhancing effective amount of a compound, or (8) treating learning disorders, comprising administering an amount effective for said treating or enhancing of a compound of claim 43.

69. **(Previously Presented):** The method of claim 68, wherein the spasticity is associated with epilepsy, stroke, head trauma, multiple sclerosis, spinal cord injury or dystonia.

70. **(Previously Presented):** The method of claim 68 of (1) treating schizophrenia comprising administering a schizophrenia treating effective amount of a compound, (5) treating pain comprising administering a pain treating effective amount of a compound or (6) treating mood disorders comprising administering a mood disorder treating effective amount of a compound.

71. **(Previously Presented):** The method of claim 68 of treating schizophrenia comprising administering a schizophrenia treating effective amount of the compound.

72. **(Previously Presented):** The pharmaceutical composition of claim 65, wherein the compound is present in an effective amount for treating schizophrenia.

73. **(Previously Presented):** The compound of claim 43, wherein R^1 is a straight-chained (C2-C3) aliphatic group.

74. **(Previously Presented):** The compound of claim 73, wherein R^2 forms a double bond with an adjacent carbon from R^1.

75. **(New):** The method of claim 70, wherein the mood disorder is depression.

76. **(New):** The method of claim 68, wherein the learning disorders are attention deficit disorders.